GANZ

MPEG-4 Encoder series Web Page V2

User's Manual

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1. Introduction

This manual explains how to interface with the GANZ Encoder and Network camera series using a standard Web browser (for example Microsoft Internet Explorer).The Web Page of the GANZ Encoder and Network camera series is implemented with the HTTP API, RTP/RTSP and Active X program.

NOTE:
Please be notified that this manual should be applied to all of the GANZ Encoder and Network camera series but some parts of UI are described on the basis of ZN-S4000AE, 4 channel network encoder model. And for more detailed specification of your model, refer to the hardware manual or specification sheet.

GANZ MPEG-4 Encoder series List
ZN-S100AE
ZN-S1000AE
ZN-S2000AE
ZN-S4000AE
ZA-NVE 12K
ZA-NVE 40K

GANZ MPEG-4 Network Camera series List
ZN-D310AE series
ZN-DT350AE series
ZN-DNT350AE series

2. Connection

2.1. Access to web page

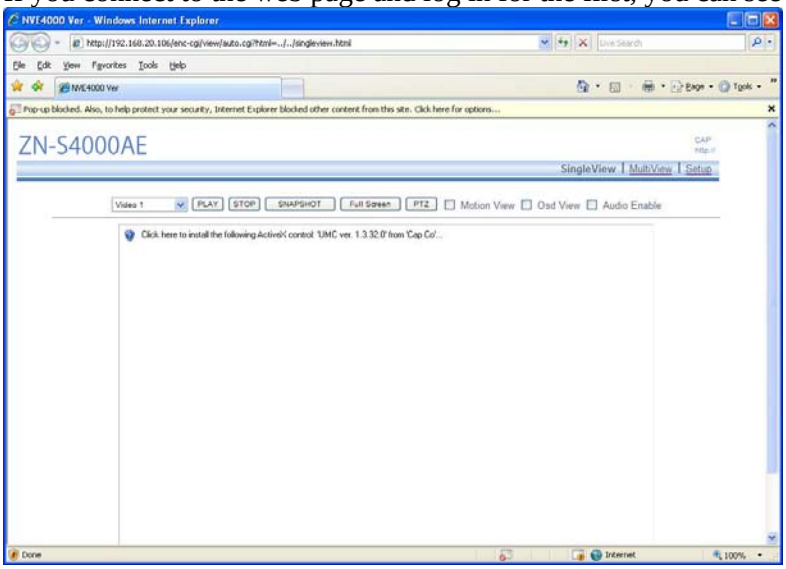
How to find the IP address of your products

1) MAC address : you can find out the default IP address of your product from MAC address if you do not change IP address. For the detailed instruction for this, please refer to **GANZ MPEG-4 Encoder Hardware Manual-eng.pdf.**

How to connect to GANZ Encoder and Network camera web page

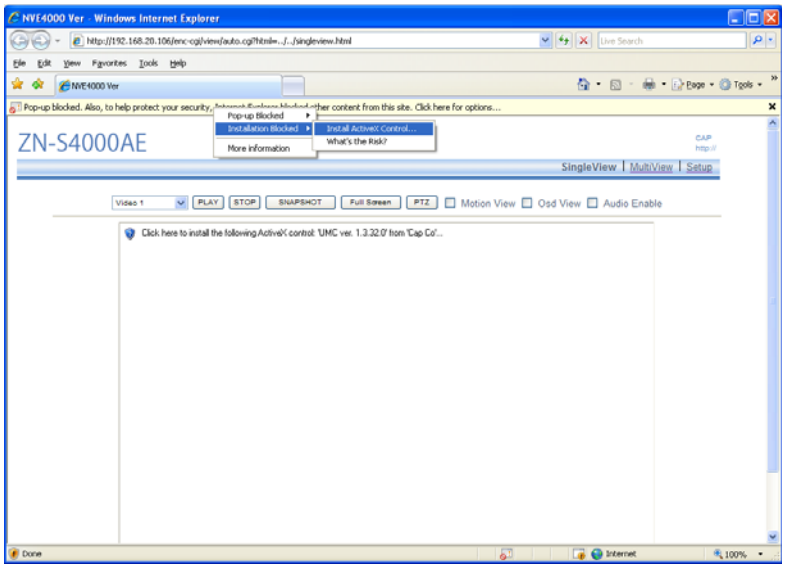
With Typing: Type IP address of the product you want to connect in the address bar at Internet Explorer directly. Then you can see the log-in message pop up and a window.
With Utility: ZNS-GIT **IPAdminTool** is provided for IP searching and management. For the detailed instruction for this, please refer to ZNS-GIT **IPAdminTool User's Manual-Eng.pdf**

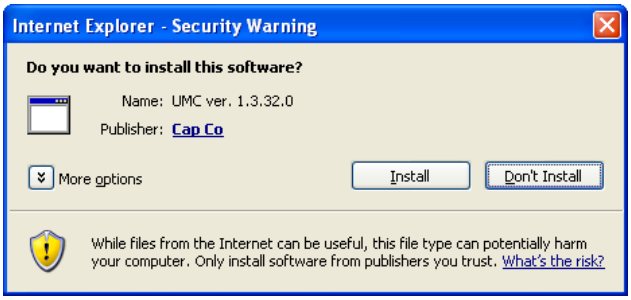
If you connect to the web page and log in for the first, you can see the window below.



2.2. ActiveX installation (UMC.cab)

You need to install ActiveX for displaying images. Click "pop-up blocked" and install the Active X control as below.





If you have failed to install ActiveX, follow the next step

Note

Delete "**AxNVE**" in "C:\WINDOWS\Downloaded Program Files" and connect again to Web Page so that Active X installer can be downloaded.

Or you can upload ActiveX (UMC.cab) manually with ZNS-GIT IPAdminTool, the IP management utility. Refer to ZNS-GIT **IPAdminTool user's manual.pdf**.

3. Main page Configuration

3.1. Single View

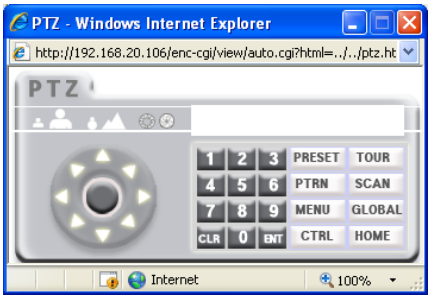
Single View shows only one channel on a page. ***Video 1*** is set as the default channel and other channels are chosen from the drop-down combo box.

- **PLAY and STOP button** - Play or stop current channel view.
- **SNAP SHOT button** – Save the snap shot of current video image. The file is saved in *\My Documents\Snapshot* folder.

Note

Snapshot is available only when the codec type is set to MJPEG format.

- **Full Screen button** – Shown with full screen
- **PTZ button** – Virtual PTZ control keyboard pops up. This is used to control PTZ IP camera products only.

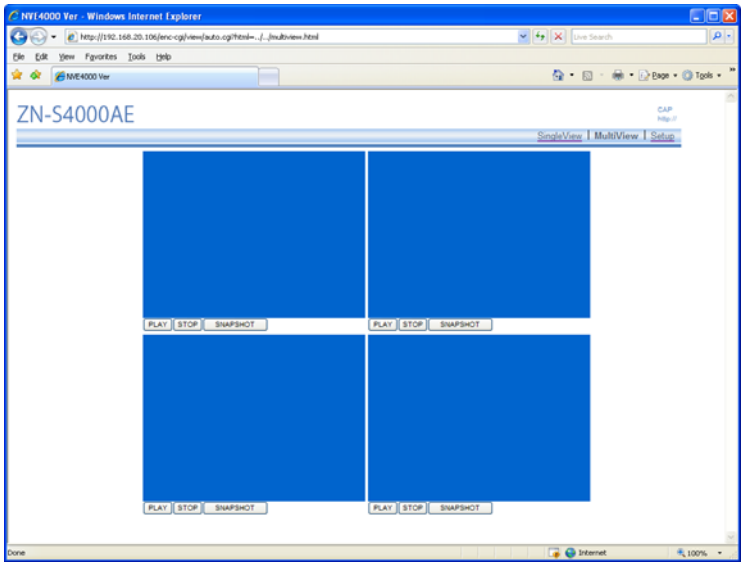


- **Motion View** – When the motion detection is set on Event menu, you can see the detection status on the current image screen.
- **OSD View** – Shows the current image information, RTSP address, Channel number, FPS, Frame type, Frame Size, Date and time on the image view screen.
- **Audio Enable** – To enable this function, the audio connection cable should be connected to IP Products from the video source. And then you can listen to the audio sound.
- **MIC Enable** – When you want to send the audio through a microphone from your PC to the camera installed site, you can enable this. And then the audio input from the microphone will be transferred via network.

NOTE : If your GANZ Encoder and Network camera model doesn't support audio output, 'MIC Enable' check box will be disabled with gray. Please check out the specification of DI/DO of your model.

3.2. Multi View

Multi View shows all channels on one page. For example, **ZN-S4000AE** displays 4 channels and ZN-S2000AE shows 2 channels. **Play, Stop** and **Snap** button work equally as in the Single view.



3.3. Setup

This page lets users set all of the values for controlling GANZ Encoder and Network camera series and update the files. See the next section "
4. Setup Configuration" to understand how to set and change the values.

4. Setup Configuration

In Setup page, you can set or change the values of GANZ Encoder and Network camera series, click **Setup** on the main page of Web Page and you can see the categories as below on the left side of the main page.

Video
- ✓ Video Setting
- ✓ OSD Setting
- ✓ Advanced

Audio
- ✓ Audio Input
- ✓ Audio Output

Network
- ✓ General
- ✓ QOS Setting
- ✓ Multicast
- ✓ DDNS
- ✓ Advanced

Event
- ✓ Motion
- ✓ Event
- ✓ Event Server

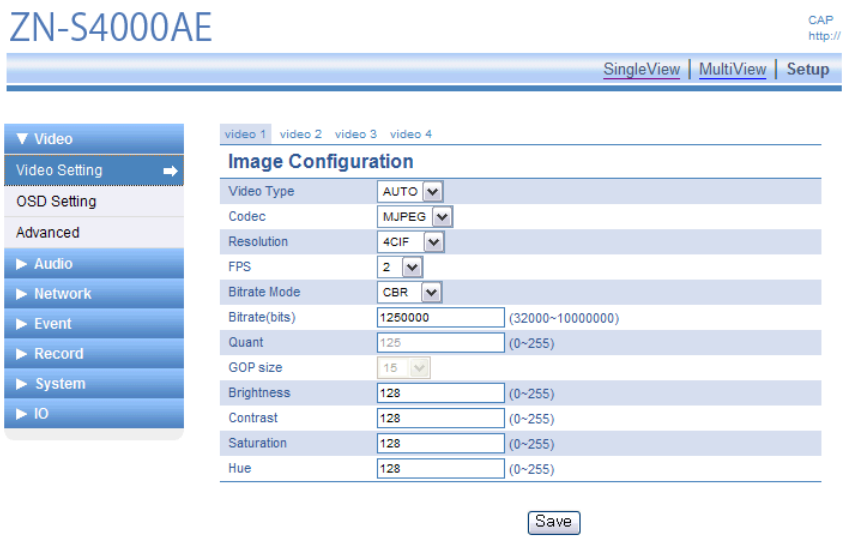
Record
- ✓ Record
- ✓ USB Data

System
- ✓ System Data
- ✓ System Update
- ✓ User Management
- ✓ PTZ control
- ✓ System Information
- ✓ Reboot

IO
- ✓ Serial Prot Setting
- ✓ DI/DO
- ✓ PTZ
- ✓ External Video Out

4.1. Video Setup

4.1.1. Video Settings



Video Type
Select a type in the Video Type box.
The video format is detected automatically when the device boots up.If you change the video type manually to a certain type, it will only affect FPS. For example, if PAL is set, FPS will be changed to 25 fps based one.

Video Codec
Select a codec format in the Codec box
MPEG-4 and MJPEG are supported and the default value is MPEG4.

Resolution
Select a resolution you want in the Resolution box.
Refer to the table below.

	NTSC	PAL
D1	720x480	720x576
VGA	640x480	640x480
QVGA	320x240	320x240
4CIF	704x480	704x576
2CIF	704x240	704x288
CIF	352x240	352x288
QCIF	176x112	176x144

FPS (Frames Per Second)
Select FPS you want to get in the FPS box.
This value represents the number of encoded frames you want to get per 1 second.

Video Format	Available frame rate
NTSC	30, 15, 7.5, 10, 6, 3.75, 2, 1
PAL	25, 12.5, 8, 6.25, 5, 4, 3, 1

Bit rate mode
CBR, *VBR* and *HVBR* are supported. The default mode is CBR.
If you set as *HVBR*, both *Bitrate* and *Quant* values can be set.

Bit rate
Type a bitrate in the Bitrate box. The default value 1.5Mbps.
Only when the bitrate mode is CBR or HVBR, it's adjustable.
The range is from 32 Kbps to 10Mbps.

Since the maximum bitrate is 10Mbps, in case of multi-channel device such as ZN-S4000AE, you should distribute the bitrate within 10 Mbps.

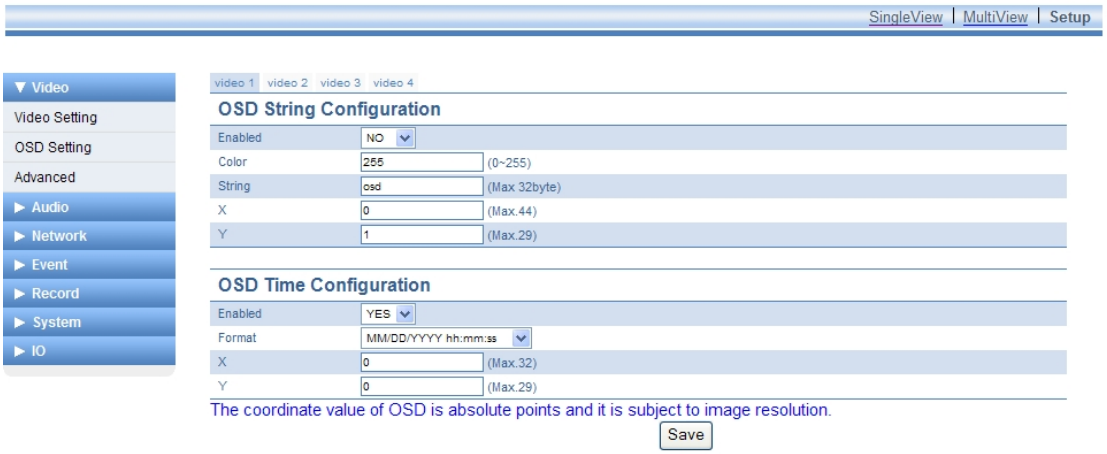
Quant
Type a quant value in the Quant box. The default value is 128. This is available only when the bit rate mode is VBR. The range is from 0 to 255. Quant value is related to the image quality of VBR setting. The lower value makes high quality images.

GOP Size
Select a GOP size in the GOP box
GOP is an abbreviation of Group of Pictures and its number means I frame interval. If GOP size is 1, totally only I frame is generated in 1 second and if 15 is set, 15 frames are captured per 1 second. Users can select a number from 1 to 255 and the default is 15.

Brightness/Saturation/Contrast/Hue
The range of each value is 0 to 255 and default value is 128.

Hue adjustment limitation!
If your item is one of the GANZ MPEG-4 Network Camera series or ZN-S100AE with PAL video format, **Hue** value adjustment doesn't work at all. This is because of the characteristic of the decoder chip built in GANZ MPE G-4 Network Camera series and ZN-S100AE. If your video format is NTSC, it has no problem in hue value adjustment.

4.1.2. OSD Settings



As the OSD function is processed in burnt-in Text method, the text is integrated in raw video data before compression.

NOTE : The coordinate value of OSD is absolute points and it is subject to image resolution. Because of this reason, if your OSD setting position is not different as you expected, adjust the image resolution.

OSD String Configuration

Enable
If you want to enable string OSD, select **Yes** in the Enabled box. Or select **No**.

Color
Grey scale color from 0 to 255. 255 means white and 0 means black.
This value applies to OSD Time as well.

String
ASCII character string. The maximum length of OSD text must be less than 256byte.

X/Y
Type the location of string by number (Coordinates of string.)
For example, if you set as ***0***,***0***, the time stamp will be shown on the top left of image.

Input range of coordinate value:
X : 0 ~ 44
Y : 0 ~ 29

OSD Time configuration

Note

If your models are ZN-S2000AE, ZN-S4000AE or any multi channel encoding models, OSD time setting is available only on the 1st channel and the other channels do not support the Time OSD setting for the systematical reason of multi channel models of NVE.

OSD time is refreshed per 1 second and synchronized with NTP server (you can set this *System – System Data* menu).

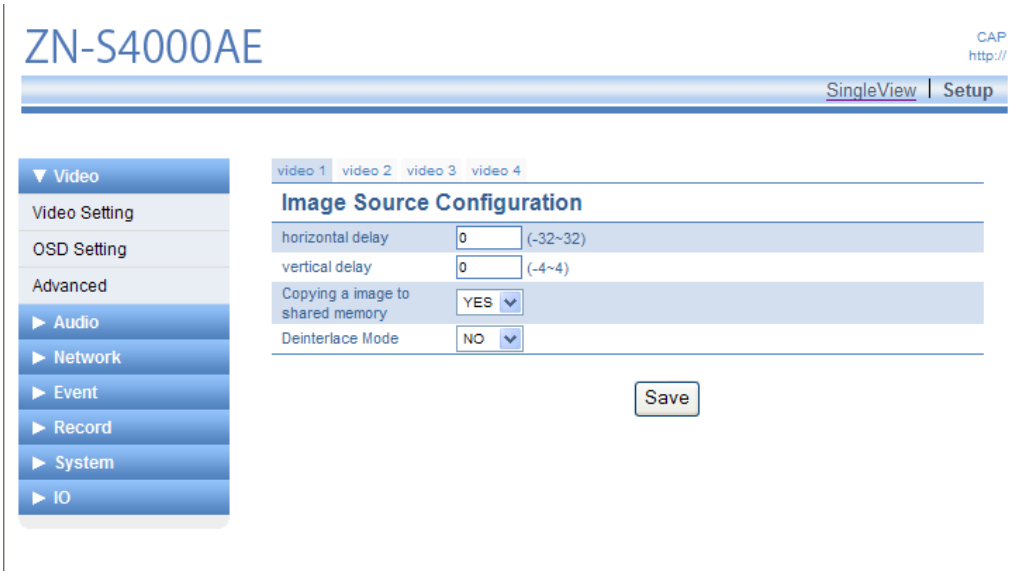
Enable
If you want to enable time OSD, select *Yes* in the Enabled box or select *No*.

Format
Select one of the formats you want from the drop-down box.

X/Y
Type the location of string by number (Coordinates of string.)
For example, if you type ***0***,***0***, the time stamp will be shown on the top left of image.

Input range of coordinate value:
X : 0 ~ 32
Y : 0 ~ 29

4.1.3. Advanced



Horizontal delay
Higher figure setting moves the image to the left direction.
It ranges from 32 to -32

Vertical delay
Higher figure setting moves the image to the upside direction.
It ranges from 4 to -4

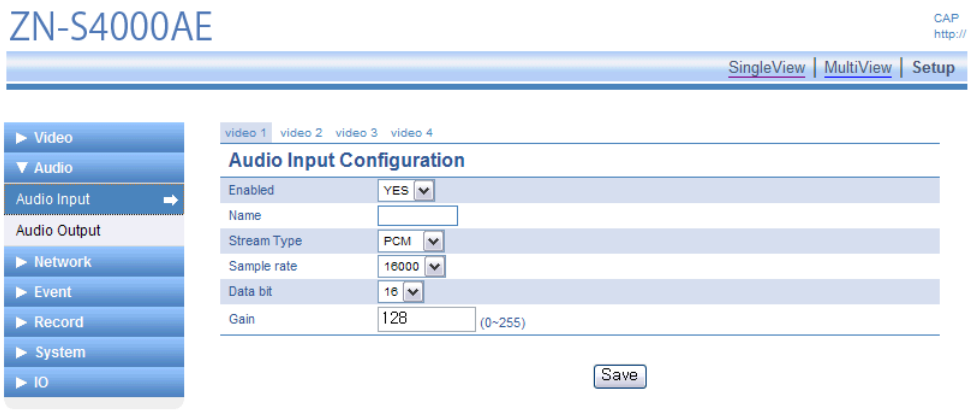
Copying an image to shared memory
Let the NVE/IP memory make the best use of the source. When GANZ Encoder works with the data from camera like a recording or FTP upload, the data copied on the shared memory is used for this. When you don't need a recording or FTP upload etc, just disable this feature and the image copying process is omitted and it helps to reduce the load.

Deinterlace Mode
You can enable or disable the deinterlacing mode by selecting YES or NO in the box.

4.2. Audio Setup

The audio setting page provides the options for the audio input and the audio output.

4.2.1. Audio Input Settings



NOTE : If your GANZ Encoder and Network camera model doesn't support audio input, this configuration part is disabled with gray. Please check out the specification of audio of your model.

Audio Input Setting is required when you want to listen to the sound from the camera site. In order to test this feature, the microphone should be connected to the audio port of GANZ Encoder and Network camera unit. Refer to the hardware manual for the connection.

Enable
Enable or disable audio input.

Name
Type a nickname for the audio input.

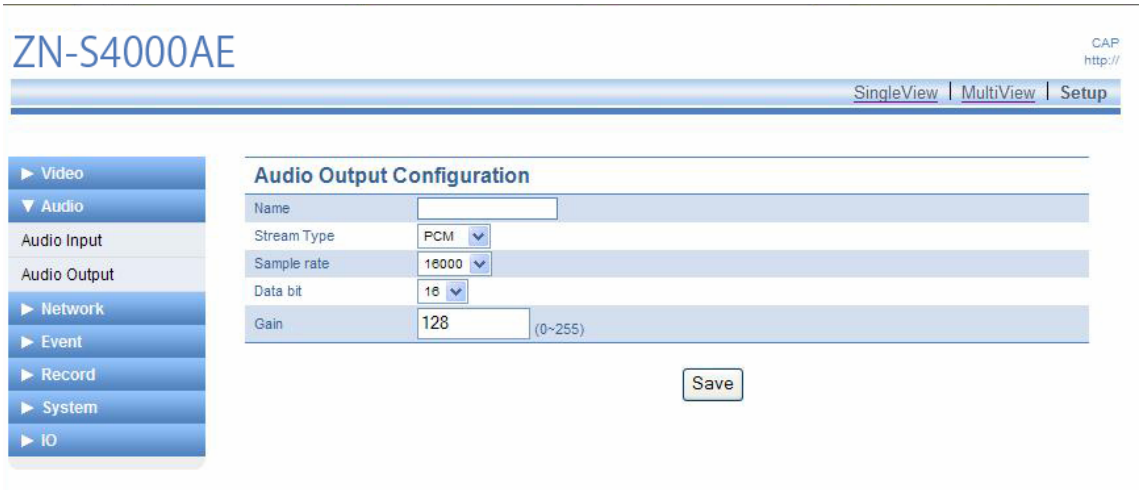
Stream Type
Select audio input format. PCM, uLaw and aLaw are supported.

Sample Rate
Select sampling frequency. 16KHz, 8KHz are supported.

Data bit
Select bit per sample. If the stream type is PCM, 8bit and 16bit are available. If the stream type is aLaw or uLaw, only 8bit is available.

Gain
Gain ranges from 0 to 255 and default value is 128.

4.2.2. Audio Output Settings



NOTE : If your GANZ Encoder and Network camera model doesn't support audio output, this configuration part is disabled with gray. Please check out the specification of audio of your model.

Audio Output Setting is required when you want to talk to people near the camera. Configure the values and click the Save button and it enables your PC to send the voice to the speakers of server. In order to test this feature, the microphone should be connected to the audio port of your PC so that you can talk to. Likewise, the speakers should be connected to the GANZ Enco der and Network camera series. Refer to the hardware manual for the connection.

Name
Type a nickname for the audio output.

Stream Type
Select audio output format. PCM, uLaw and aLaw are supported.

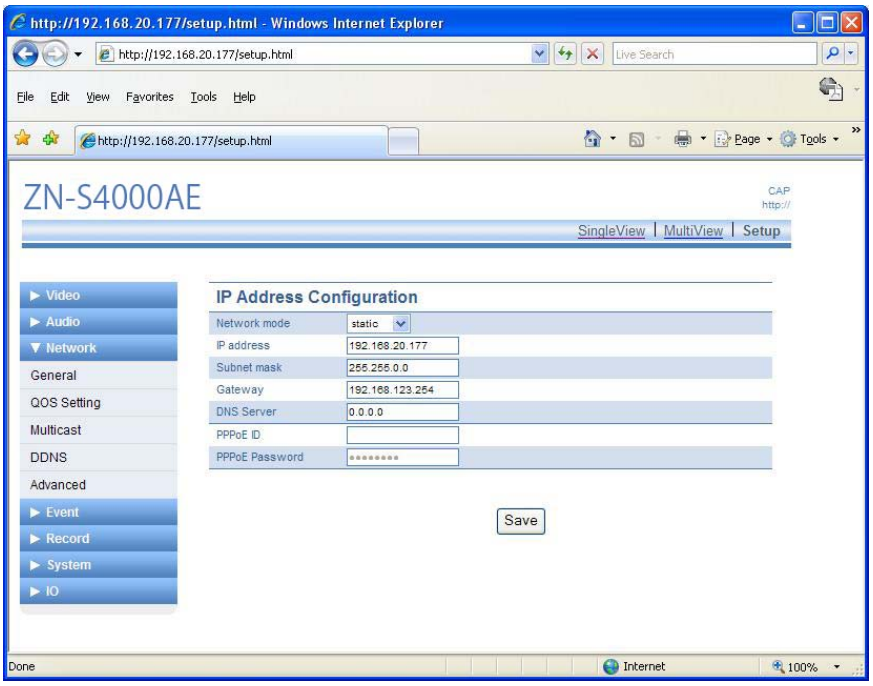
Sample Rate
Select sampling Frequency. 16KHz, 8KHz are supported.

Data bit
Select bit per sample. If the stream type is PCM, 8bit and 16bit are available. If the stream type is aLaw or uLaw, only 8bit is available.

Gain
The range of each value is 0 to 255 and default value is 128.

4.3. Network Setup

4.3.1. General Settings



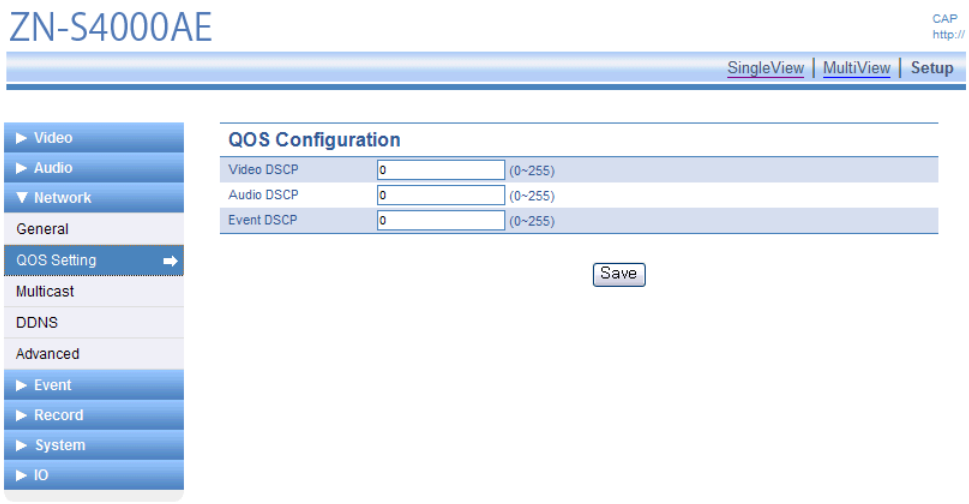
IP Address Configuration

If IP configuration is DHCP, IP address, Subnet mask, gateway and DNS are received from a DHCP server. If IP configuration is STATIC, you have to input the IP address, Subnet mask, gateway and DNS manually as IPv4 format (e.g. 192.168.18.96).

If you want to use PPPoE feature, type the PPPoE ID and password you got from the service provider.

Note: You can find the default network status of GANZ Encoder and Network camera using "Z NS-GIT IPAdminTool.exe" or MAC address .Refer to ZNS-GIT ***IPAdminTool user's manual*** or ***GANZ Encoder and Network camera Hardware manual*** for detailed information.

4.3.2. QoS Settings



NVE/IPE uses DSCP model for implementing QoS. Video, audio and event classes are available for that.

What is DSCP?
It is short for Differential Services Code Point, which is a field in the header of IP Packets for packet classification purposes.

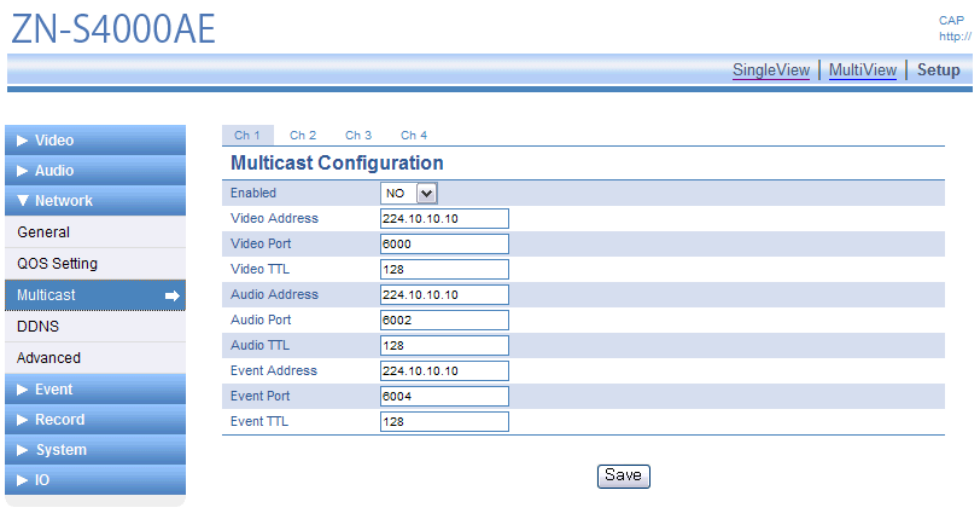
Video DSCP
DSCP of video packet

Audio DSCP:
DSCP of audio packet

Event DSCP
DSCP of event packet

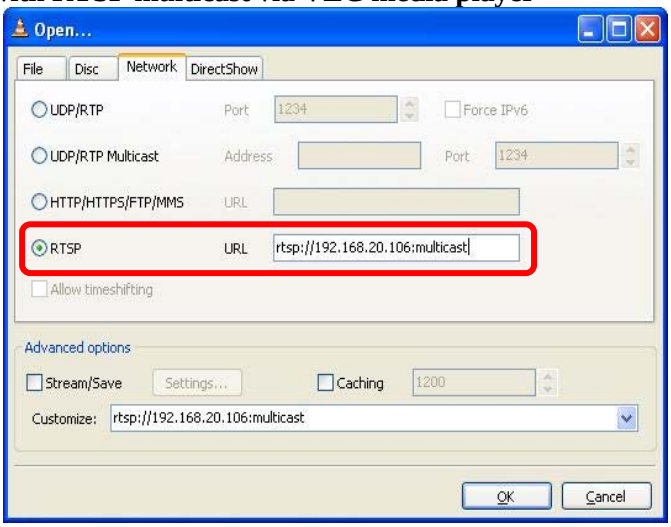
DHCP values should be specified in decimal number converted from original 6 bit binary digit. Default value is 0, which means 000000 for DSCP value. To set the device available of supporting Expedited Forwarding, the recommended value for DSCP is 46 (=101110).

4.3.3. Multicast Settings



This page provides the multicast configuration of each channel. The addresses mean the group address which is required to receive the each data from the router.
The values in the boxes are default and you can set the values according to your network requirement.

How to see the video with RTSP multicast via VLC media player



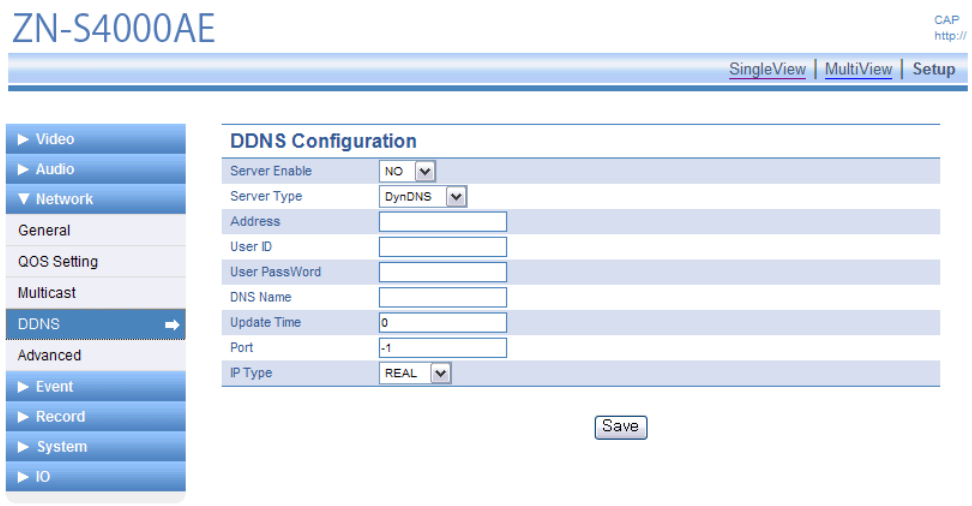
We support only RTSP multicast (UDP/RTP Multicast is not supported in GANZ encoder)

1. Enable the ***Multicast configuration*** on the NVE Webpage.
2. Open the VLC media player and go to ***File*** -> ***Open Network stream*** then you can see the window above.
3. Tick on RTSP tab, set the URL of GANZ encoder address as the example above.
4. You can see the view with RTSP multicast

If you want to view channel 2, 3 or 4, enter *rtsp://[NVE_IP]:[port number]/multicast*. The default port number of RTSP is 554 and it doesn't matter to skip the default port number(554) to view the 1st stream. But for other channels, add the port number at the end of address like

examples below.
To view 2st stream – rtsp://192.168.29.23:555/multicast
To view 3rd stream – rtsp://192.168.29.23:556/multicast
To view 4th stream – rtsp://192.168.29.23:557/multicast

4.3.4. DDNS Settings



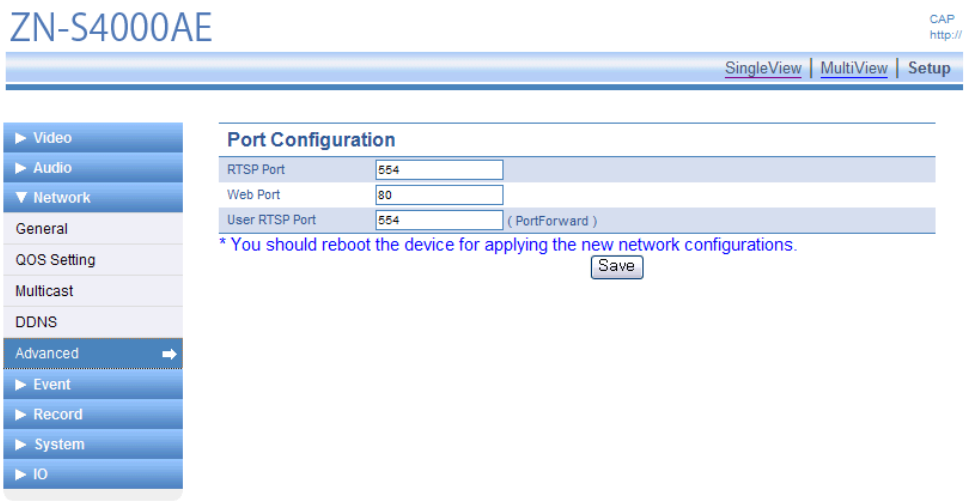
For DDNS configuration setup, you must visit dyndns.com ahead and make an account for DDNS service.

- Server Enable: Select YES to use DDNS.
- Server Type : DynDNS (No other settings allowed)
- Address: www.dyndns.com (No other servers allowed)
- User ID: your user ID created at the Dyndns.com
- User PW: your password registered at the Dyndns.com (Case-sensitive)
- DNS name: your dynamic domain host server name.
- Update time : Specify how often GANZ Encoder and Network camera check the dynamic domain server (unit : minutes).
- Port : Default value is -1. This means the DDNS feature is disabled as a default. If you use DDNS, you can type the required port number for DDNS.
- IP Type (Real/Local) : *Real* represent that the device's public IP seen by DDNS server will be registered to the DDNS server. If you select Local, private IP of device will be registered.

Note

Note : Only one dynamic host name is saved.

4.3.5. Advanced Settings



RTSP Port
This is the port number of first channel for RTSP. If a device has more than one channel, the port number of next channel succeeds the port number of the first channel.
For example, if the port number of first channel is 554, the second channel would be 555.

Web Port
This is the port number for HTTP.

User RTST Port
This setting is required ONLY when you have set 'port forwarding' on router device. So, if your network is not related to port forwarding, just leave this "User RTSP Port" value empty or set same value with RTSP Port as the value means nothing. To be more detail about this: when "port forwarding" is done on a network router, ActiveX viewer on the client side can't find the port number and ActiveX image may not be seen. Because ActiveX is operated only on a client and not able to get the network setting values of GANZ Encoder or Network camera.

4.4. Event Setup

This manual assumes that Motion Detection is an event for GANZ encoder action trigger. So, consider this carefully and follow the setting step as the order below. If your event factor is not Motion Detection, you can just skip **Step2**. Motion setting.

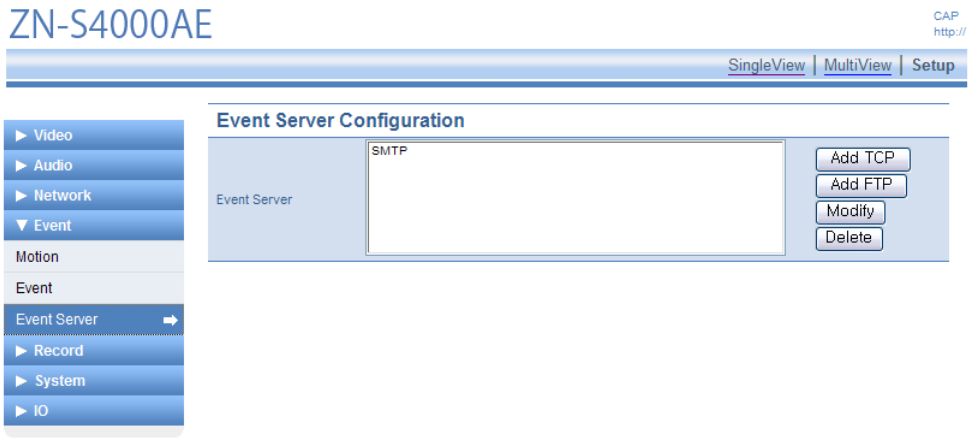
Step 1. Event Server setting
Step 2. Motion setting
Step 3. Event setting(relate the event setting and motion detection setting you set)

GANZ encoder series support SMTP, TCP and FTP server as an event server.
Seeing the left menu of Event, you can find the ***Motion***, ***Event*** and ***Event Server*** tabs.
To apply this event function on GANZ encoder**,** it is recommended to set Event server first and move to Motion setting.

Ahead of event server setting, the setting as below should come first.

- Go to the ***Video -> Advanced*** menu on the left of this page and turn on ***Copying a image to shared memory*** to ***Yes*** and change the codec value as ***MJPEG*** at ***Video Codec*** menu

4.4.1. Event Server Settings



4.4.1.1. SMTP Server Settings

How to register SMTP server

Step 1. Click on the written character ***SMTP*** in the box and press ***Modify*** button on the right.
Step 2. Then, you can see the screen below.
Step 3. After filling the blanks as below, press ***Add*** button and "***Ok***" is popped up.
Step 4. Adding SMTP server is completed.

FromEmail
E-mail address of a sender

MailServer1
SMTP server address

MailServer1 Port
SMTP server port number (default port number 25)

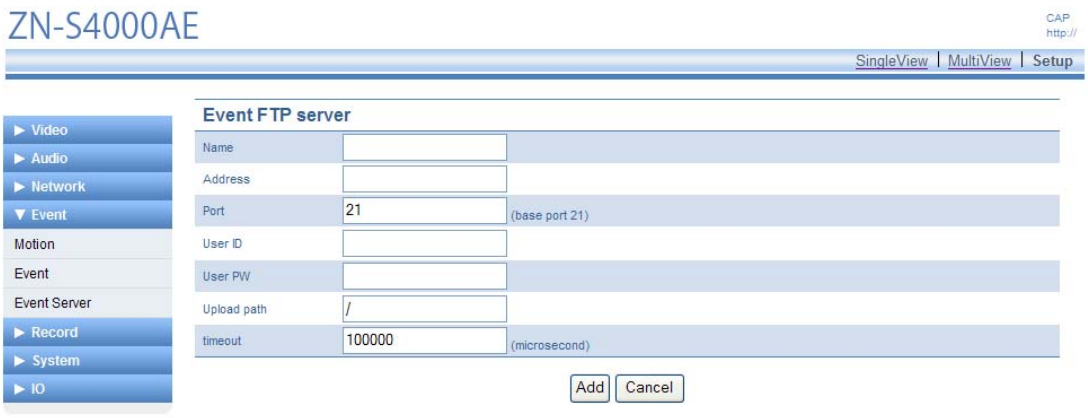
ID
Type the ID of the sender's mail account

Password
Type the password of the sender's mail account (Case-sensitive).

4.4.1.2. FTP Server Settings

How to resister FTP server

Step 1. Press ***Add FTP*** button.
Step 2. Then, you can see the screen below.
Step 3. After filling in the blanks, press ***Add*** button and "***Ok***" is popped up
Step 4. Adding ***FTP*** server is completed



Name
Random name for FTP server

Address
IP address or domain name of FTP server
NOTE : Domain name is supported at firmware K641.13410 or higher. Make sure if the DNS setting is enabled to use domain name of FTP server.

Port
Port number of FTP server between 0 and 65535

User ID / User PW
FTP Server log-in ID and Password (Case-sensitive)

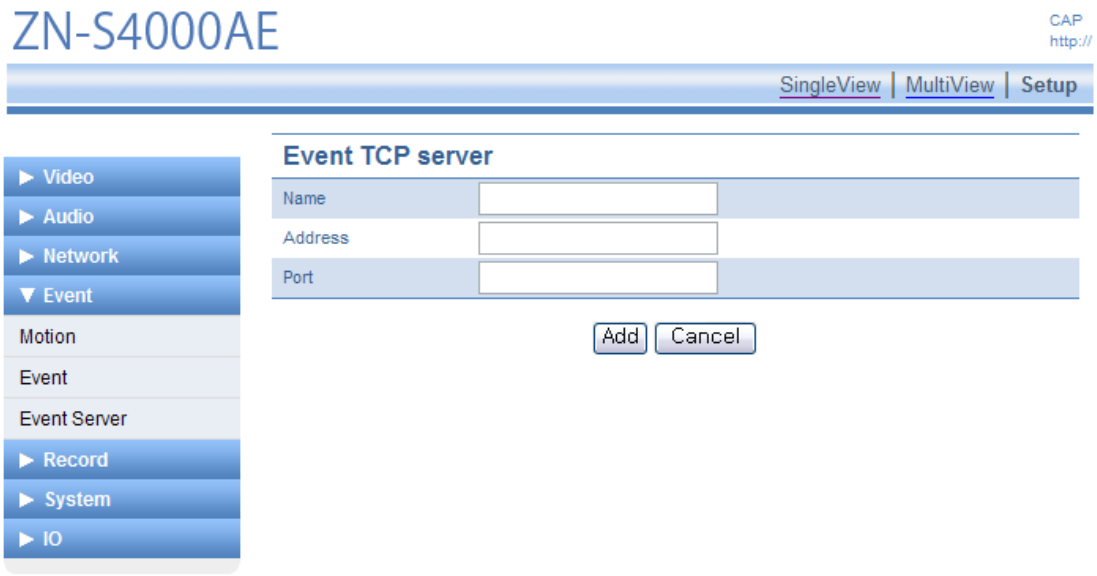
Upload path
Type the path of uploaded files
For example: /home/

Timeout
Timeout value for FTP connection and data transfer (Unit:μs)
Default value is set as 100000 (= 0.1 sec) but you can change it as you want.

4.4.1.3. TCP Server Settings

How to resister TCP server

Step 1. Press ***Add TCP*** button.
Step 2. You can see the screen below.
Step 3. After filling in the blanks like above, press ***Add*** button and "***Ok***" is popped up.
Step 4. Adding ***TCP*** server is completed.



Name
Random name for TCP server

Address
IP address of TCP server as Ipv4

Port
Port number of TCP server between 0 and 65535

4.4.2. Motion Detection Settings

If you completed setting ***Event Server***, move to the ***Motion*** tab on the left for setting the motion detection function.

How to register Motion Detection

Step 1. Select a video channel from the combo box of ***Image Source*** and press ***Play*** button.
Step 2. Select ***Layer*** from the combo box of ***Motion Enable Layer ID***.
Step 3. Tick the checkbox of ***Motion Enable Layer ID***.
Step 3. Right-click anywhere on the screen to make a #Area.
Step 4. Adjust the size of #Areas by dragging in and out of the edge.
Step 5. Put ***Threshold*** value and ***Activity*** value between 0 and 255.
Step 6. Press ***SAVE*** and ***RUN*** button for testing the motion detection.

You can set ***Layer*** up to 3 and each layer can have up to 8 ***areas***.
The ***Object size*** and ***Sensitivity*** values of each ***Layer*** applies to all of the ***areas*** in one ***Layer***.
Terminology of ***ObjectSize*** and ***Sensitivity*** are as follows

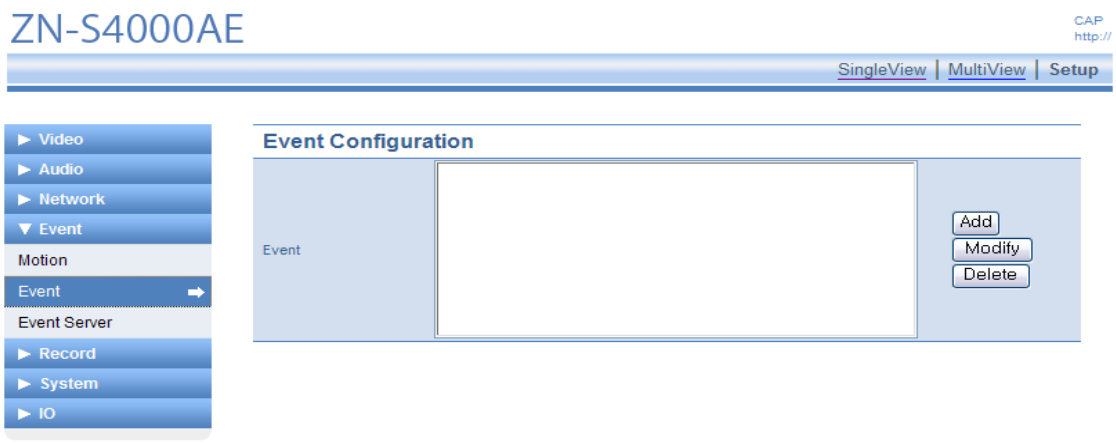
- Sensitivity – sensitivity of each macro block (16 x 16 pixels).
- Objectsize – proportion of the exceeded ***Sensitivity*** of macro block in the #Area.
- The Value of ***Sensitivity*** and ***Objectsize*** ranges from 1 to 255 and a lower figure means the higher sensitivity.

Note

In case of Kernel16Xnnn, it supports only one #***Area***, even if you set several "#***Areas***.

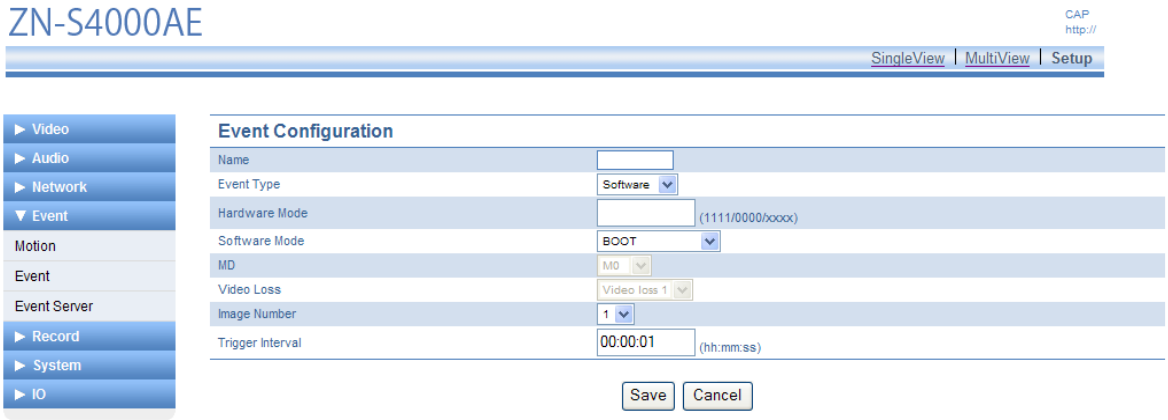
4.4.3. Event Settings

How to register Event : Please refer to the step 1, 2 and 3.



Step 1

1. Click ***Add*** button to create an event.
2. Then, you can see the screen below and fill the information in the blanks.
3 Click ***Add*** and if you see ***Ok*** sign, it shows event is completely added.



Name
Type random name of the event

Event Type

- Software – signal of device boots, motion detection and video losses, etc.
- Hardware – signal of D/I activation, such as Sensor.

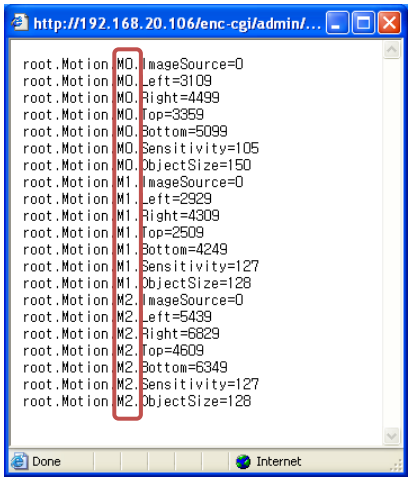
Hardware Mode
If the event type is a hardware type, this control is enabled.
Nnnn = where n = {x, 1}
x = do not trigger
1 = trigger on activation

For example, "1xxx" means to trigger when first D/I is activated.
"1xx1" means to trigger when the first and fourth D/I are activated.

Software Mode
Select an event mode among motion detection, video loss and boot.

Motion Detection: Event is signaled when the motion is detected.
Video Loss: Event is signaled when the video loss is disconnected or connected.
BOOT : Event is signaled when the system is rebooted.

MD
Enable only if software mode is ***Motion*** detection.
To set the MD value, press **View CGI** button on **Motion** setting page and then you can see the window as below.



For example, if you set MD as "M0," it means triggering motion is from Layer1.
In the same manner, M1 means Layer 2, M2 means Layer 3.

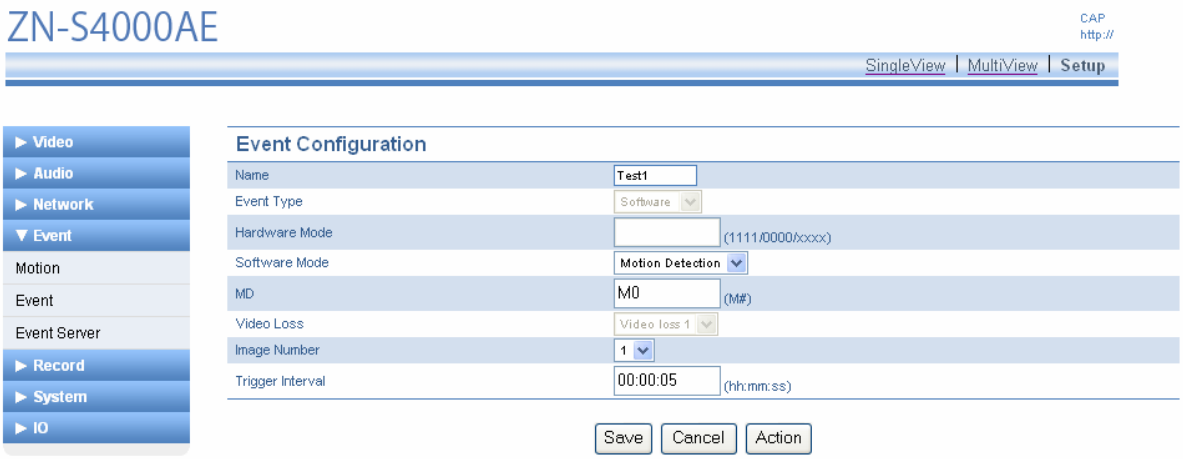
Video Loss
Channel numbers for triggering.

Image Number
Channel numbers to connect with event

Trigger Interval
'00:00:01' is set as the default value.
Assume the value is '00:00:05,' and it means even if the event happens several times for 5 sec, the GANZ encoder will trigger only once per 5 sec.

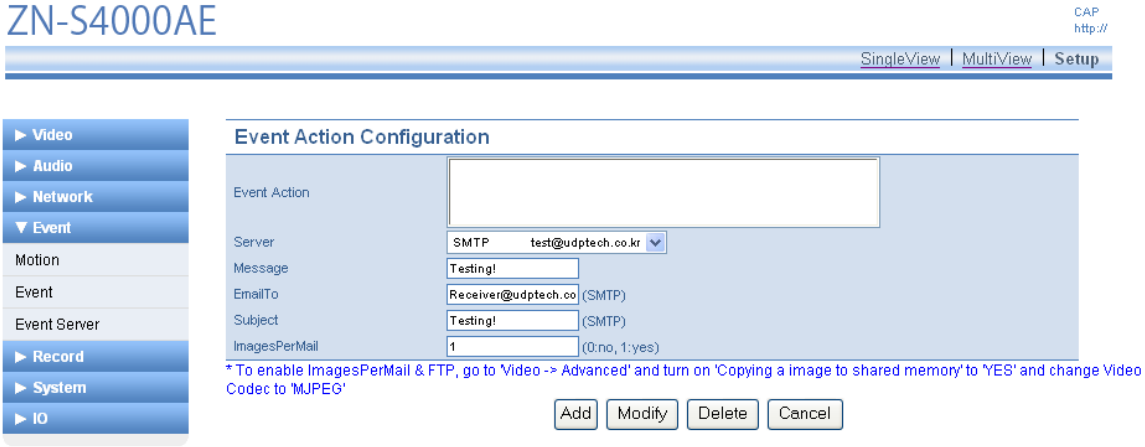
Step 2

1. Go back to the ***Event*** tab on the left menu and select the event you created in the box.
2. Click ***Modify*** button.
3. Press the ***Action*** button that is created.



Step 3

1. The screen as below is displayed. Select the proper server on the ***Server*** list and set the values in the blanks.
2. Click ***Add*** and if you see ***Ok*** sign, it shows it's completely added.



Event Action
The actions you created are listed. You can select one of those from the list.

Server
Select the server you want.
We provide the TCP, SMTP, FTP, DO and USB recording server. If the server you want is not shown in this list, that means the registration of the server was not successful. Go back to the *4.4.1 Event Server Setting* section and follow the instruction for server addition.

Message
Type an e-mail message you want to send as the example above.

EmailTo
Type an e-mail address of receiver as the example above.

Subject
Type the subject of e-mail as the example above.

ImagePerMail
If you want a captured image with the e-mail message, type ***1*** or just insert ***0***.

When you set the values on the page of ***event action configuration,*** the must-set values are different.

- SMTP : Set all of the blinks
- FTP : Only server and message are required(message can be any words)
- TCP : Only server and message are required(message can be any words)
- DO : No need to fill in.
- USB recording : No need to fill in.

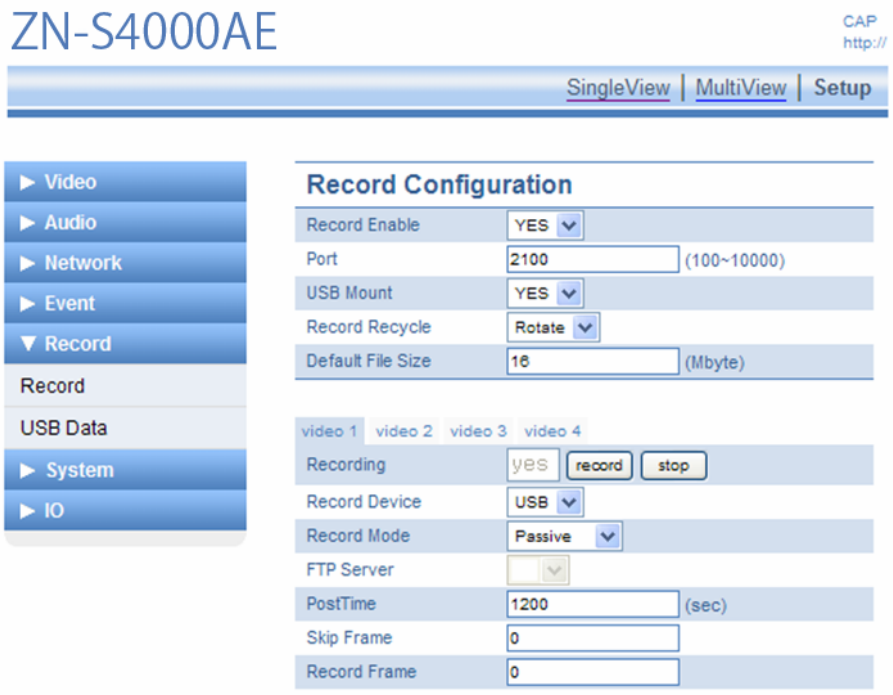
4.5. Record Setup

4.5.1. Recording on USB memory stick

When you remove the USB memory stick from GANZ Encoder and Network camera series after recording.
Before you remove the USB memory stick, change the *USB Mount* value to No first. Or, the recording may not work properly even if you inset the memory again when you need to record.

Caution

If you have a problem as, mentioned above, please reboot the GANZ Encoder and Network camera series and then try recording again then it will work fine.



Preparation before recording

Step 1. Insert the USB memory stick to the module of GANZ Encoder and Network camera series.

Step 2. Go to the *Web Page -> Set up -> Record* and set the value of *USB Mount* to *YES* as above.

Step 3. Select *USB* for the value of *Record Device.*

Select which recording mode you want between *Passive* mode and *Schedule* mode. For details,

refer to the explanation below.

How to record video NOW (Passive mode)

Step 1. Set the *Record Enable* as *YES*

Step 2. Set the *Record Mode* as *Passive*

Step 3. Type the *port number* and *Record Recycle*.

- *Port number*: Used for playback and 2100 is set as the default.
- *Record Recycle*: *Rotate* lets the new files overwrite existing files when USB memory is full. *None* lets the recording stop if the USB memory is full.

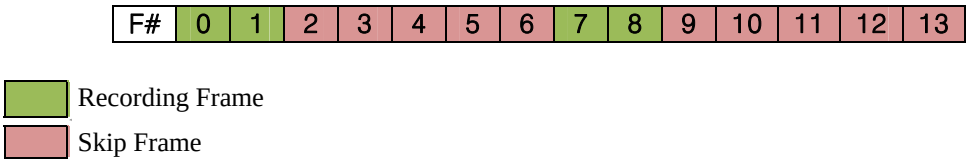
Step 4. Set the *PostTime* with second unit. If you want to record for 30 minutes, type 1800 for the value of *PostTime* and then the recording will continue for 30 minutes on pressing the *Record* button.

Step 5. Set the *Skip Frame* and *Record Frame* with referring to the explanation and examples below.

- *Skip Frame*
  This is to set the number of frames to skip between *Record Frame*. Refer to the examples below.
- *Record Frame*
  This is to set the number of recording frames. For example, if the value is 0, only 1 frame is recorded every time after skipping the number of *skip frame* you set above.

  e.g. If you set 149 for *Skip Frame* and 0 for *Record Frame* with FPS 30, you will get 1 frame per 5 seconds.

  e.g. If you set 5 for Skip Frame and 1 for Record Frame with, you will get the frames as below.



Step 6. Click *Record* button and then the recording starts.

How to record on SCHEDULE (Schedule mode)

If you want to record the video according to the specific date and time, please follow this instruction.

Step 1. Follow the same steps of ***How to record Video NOW*** except for Step 2.

Step 2. Set the *Record Mode* as *Schedule.*

Step 3. Set Record *Weekdays*, *Start Time* and *End Time* as the description below.

- *Record Weekdays*
  You can assign days for recording . First digit corresponds to Sunday and last digit corresponds to Saturday. For example, if you set as 0111110, the recording runs only from Monday to Friday.
- *Start Time*
  You can type the time to start recording with 00:00 format.
- *End Time*
  You can type the time to end recording with 00:00 format.

Step 4. Click the *Record* button and then the recording starts.

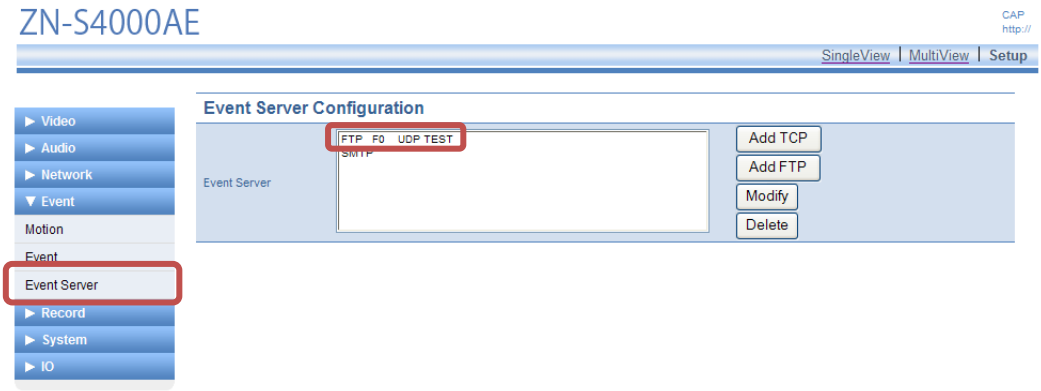
4.5.2. Recording on FTP server

Step 1. In order to record the video on FTP server, FTP server should be added in advance. For this, go back to the section ***4.4.1.2 FTP Server Settings*** and check out if the FTP server is added to GANZ Encoder and Network camera series properly.

Step 2. Set *Record Device* as FTP

Step 3. Set *Record Mode* as you want. You can find the difference between *Passive* mode and *Schedule* mode on ***4.5.1 Recording on USB memory stick***.

Step 4. Set *FTP Server* number. This is available only when you finish the Step 1. For example, if you added FTP server name as *UDP TEST*, then you can see *FTP F0 UDP TEST* screen as below. This *F0* is the value for *FTP Server.*



Step 5. Set the *PostTime* with second unit. If you want to record for 30 minutes, type 1800 for the value of *PostTime* and then the recording will continue on pressing the *Record* button for 30 minutes.

Step 6. Set the *Skip Frame* and *Record Frame* with referring below explanation and example.

- *Skip Frame*
  This is to set the number of frames to skip between *Record Frame*. Refer to the examples below.

- *Record Frame*
  This is to set the number of recording frames. For example, if the value is 0, only 1 frame is recorded every time after skipping the number of *skip frame* you set above.

  e.g. If you set 149 for *Skip Frame* and 0 for *Record Frame* with FPS 30, you will get 1 frame per 5 seconds.

  e.g. If you set 5 for Skip Frame and 1 for Record Frame with, you will get the frames as below.

F#	0	1	2	3	4	5	6	7	8	9	10	11	12	13

Recording Frame

Skip Frame

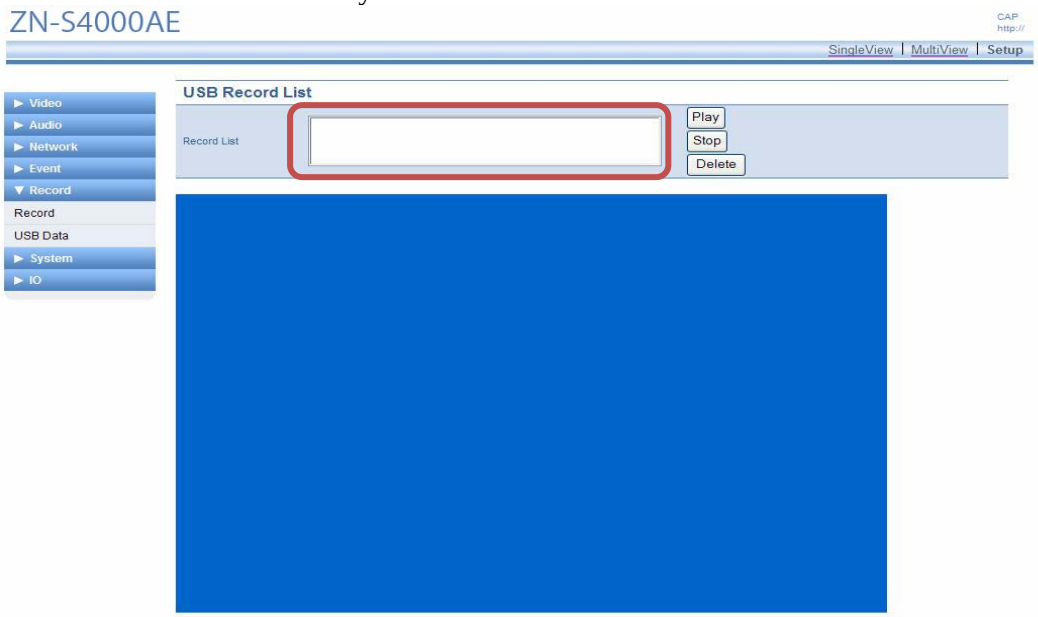
Caution

You must set the video format to MJPEG when you want to use Ftp server for recording.

4.5.3. Playback the recoded data in USB device

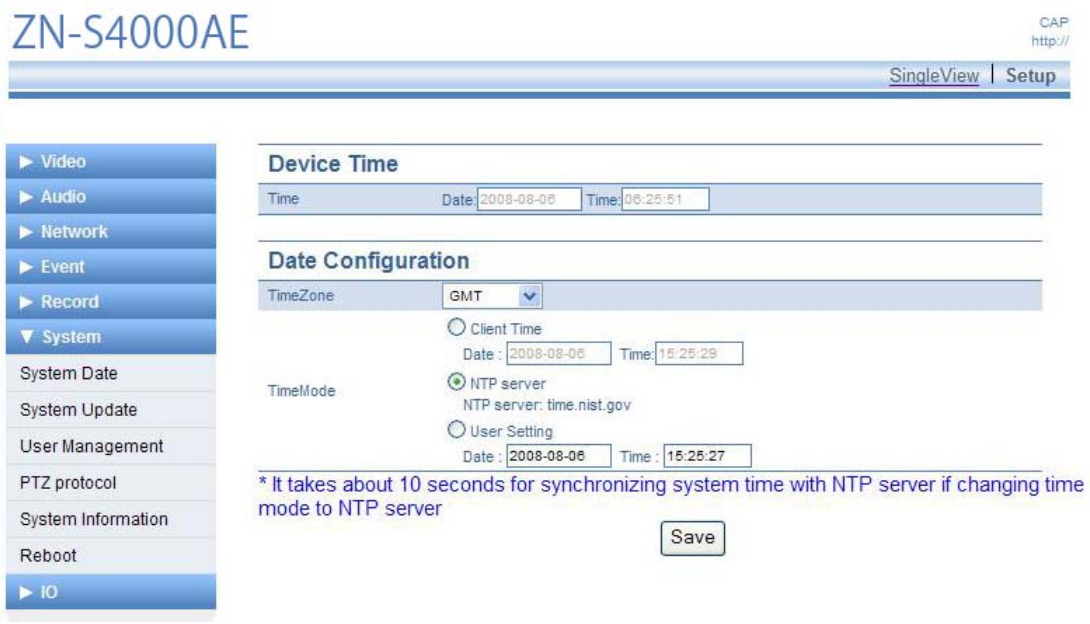
If you have completed USB recording steps, you can check out the recording status. If you don't see created file in the ***Record List***,it means recording is not completed

- **Record List** : Show the created recording files (Red line box in the picture below)
- **Play / Stop** : Select one of the files in the ***Record List*** and click ***Play*** or ***Stop*** button for display control
- **Delete** : Select the file you want to remove and click ***Delete*** button



4.6. System Setup

4.6.1. System Date



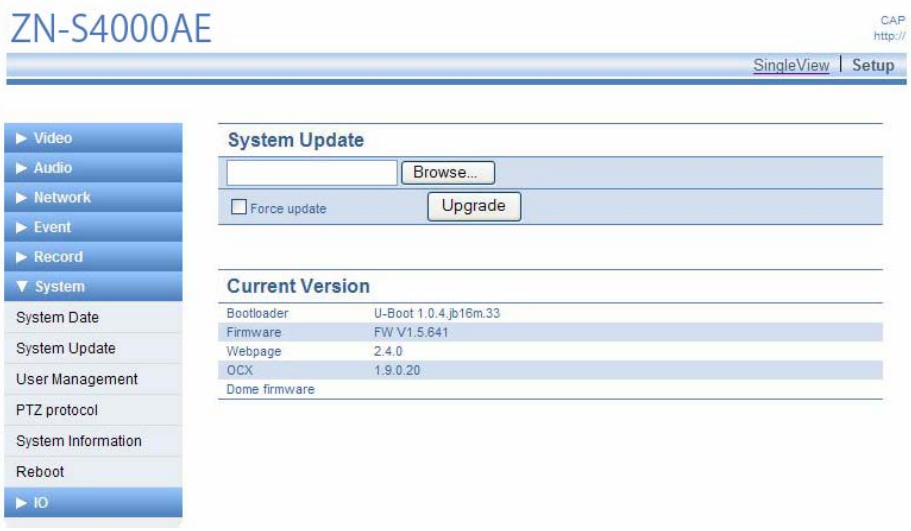
Device Time
It displays the date and time of GANZ Encoder and Network camera system

Time Zone
Select your time zone

Time Mode
You can select a time mode with 3 options and this will be reflected on GANZ Encoder and Network camera system

- **Client time** : Synchronized with your current PC time .
- **NTP server** : Synchronized with NTP server. 'time.nist.gov' is selected as a factory default but you can choose one of them from the list.
- **User setting** : Users can type time manually as they want.

4.6.2. System Update



This page is required when you want to update another version of software such as bootloader, firmware, webpage, OCX or Dome Firmware. However, for more various update function and system information, "ZNS-GIT IPAdminTool.exe" is more recommended, as this utility is made for the purpose of managing the IP products in more user friendly way. Refer to the ZNS-GIT ***IPAdminTool user's manual*** provided in the SDK.

System Update

You can upload firmware files and update your GANZ Encoder and Network camera. Click the ***Search*** button and choose the file you want to upload. After that, click the ***Upgrade*** button. In a while, you can see the updated version information in the ***Current Version*** as below.

Current Version

- **Bootloader** : Current bootloader version
- **Firmware** : Current FW version
- **Webpage** : Current Webpgae version
- **OCX** : Current ActiveX version
- **Dorm Firmware** : This information is shown only when you have just uploaded the dorm firmware on this ***System Update*** page. This works only when your IP product is a dorm camera type. If you have not uploaded any dorm firmware with this, the version information doesn't appear here.

4.6.3. User Management

There are two user types provided by default.

ID	Password	Security Level
root	pass	Admin
guest	guest	Guest

Accounts can be created up to 10 including two default users.

- **ID**: Up to 32 characters with the combination of alphabet and digits. First character must be an alphabet (Case-sensitive).
- **Password**: From 3 up to 8 characters with the combination of alphabet and digits (Case-sensitive).

How to add a user
1. Click ***Add***.
2. Type ID & password and select security level on "User add" pop-up window.
3. Select ***Add*** button on "User add" pop-up window.
4. Click ***Close*** on "User add" pop-up window.

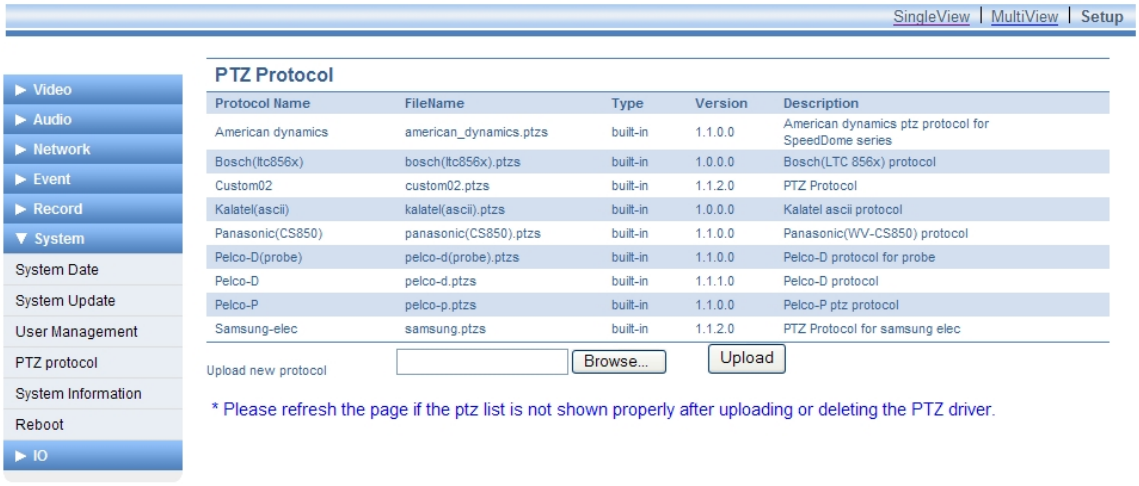
How to delete a user
1. Select a user to delete in User List.
2. Click ***Delete***.
3. Click ***OK*** on confirming dialog.
4. Click ***Close*** on "Remove user" pop-up window.

How to modify a user
1. Select a user to modify in User List
2. Click ***Modify***.
2. Modify the password or security level.

3. Select ***Modify*** on "User Modify" pop-up window.
4. Click ***Close*** button on "User Modify" pop-up window.

4.6.4. PTZ Protocol

This page shows the list of current PTZ protocols built-in the GANZ MPEG4 Encoder and also you can upload the new protocol as well if your camera is using protocols other than on the GA NZ MPEG4 Encoder webpage.



How to add PTZ protocol manually

1. Click ***Browse*** button.
2. Choose the required file and click ***Upload*** button.
3. In a while you can see the protocol is added on the list

If you go to the menu of ***IO -> PTZ,*** you can choose the PTZ protocol you want.
Refer to the ***4.7.3 PTZ*** to find out how to apply the newly added protocol to GANZ Encoder.

4.6.5. System Information

This page shows the system information below (The picture above is the example of ZN-S4000AE).

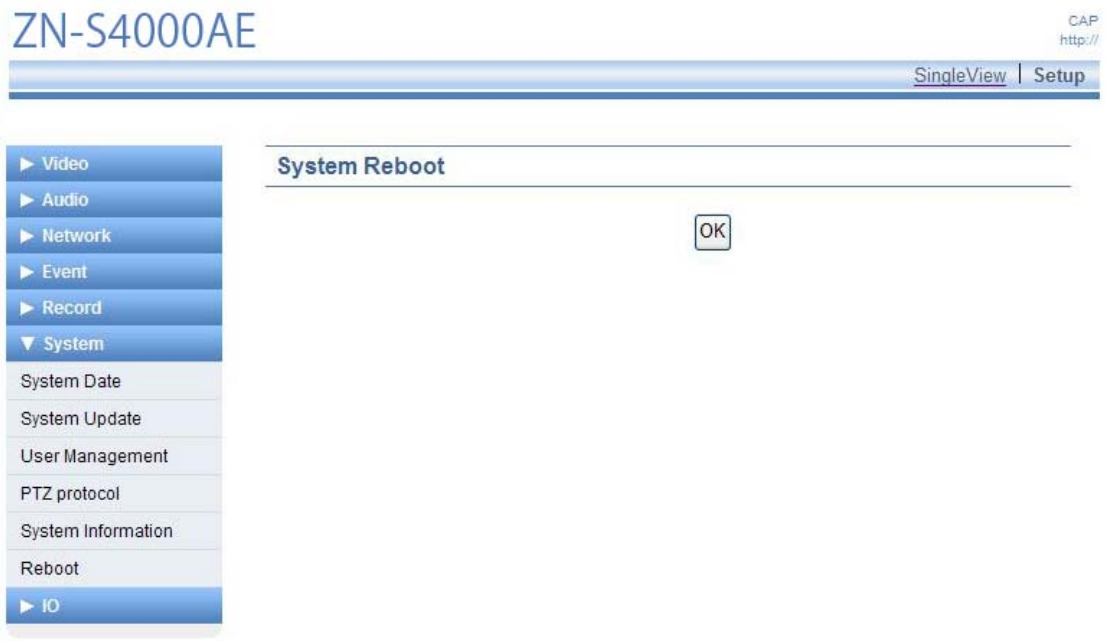
ZN-S4000AE Information

- **MAC** : MAC Address
- **TIME** : Date and time information being applied to the current GANZ Encoder and Network camera system

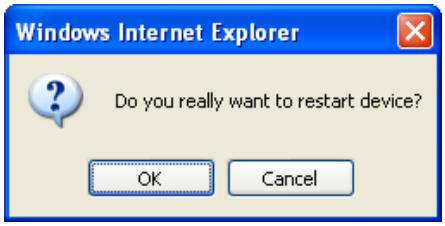
Version Information

- **Bootloader** : Bootloader version.
- **Firmware** : Current firmware version
- **Webpage** : Current web page version
- **OCX** : Current ActiveX version
- **Dorm Firmware** : This information is shown only when you have just uploaded the dorm firmware on this ***System Update*** page. And also the works only when your IP product is a dorm camera type. If you have not uploaded any dorm firmware with this, the version information doesn't appear here.

4.6.6. Reboot

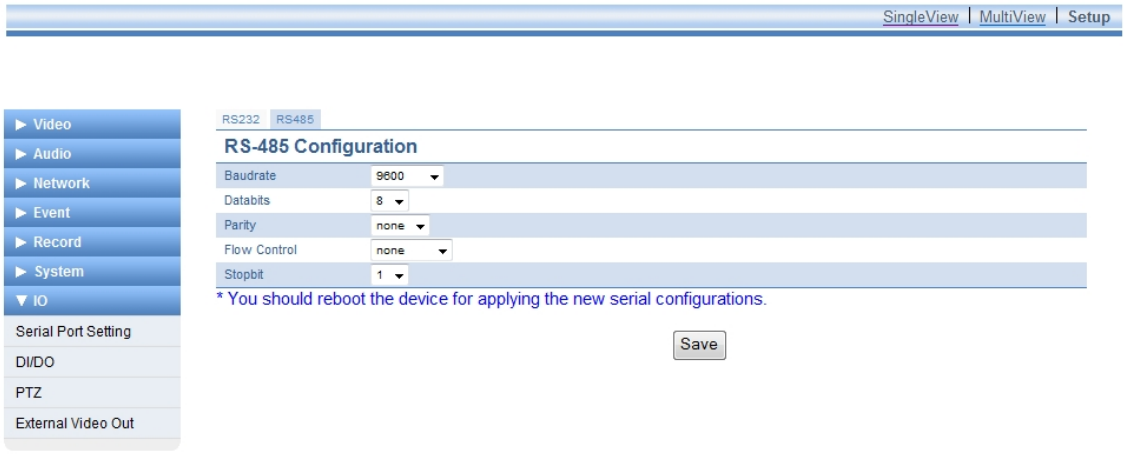


When you want to reboot your GANZ Encoder and Network camera system on the webpage, you can reboot it on this page without physical operation. Just click OK button and then a pop up window as below is shown. It will take about 1~2 minutes to complete system rebooting. It will take about 110 sec.



4.7. IO Setup

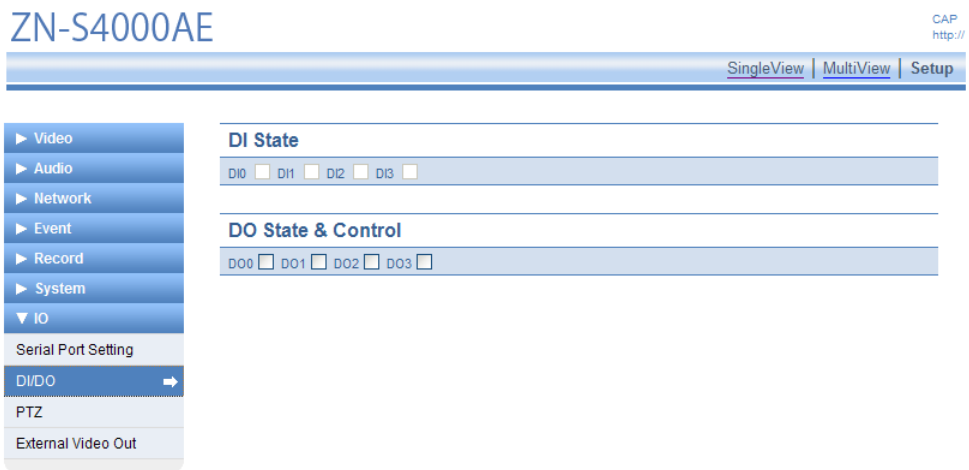
4.7.1. Serial Port Setting



This page provides the configuration of RS-232C and RS485. You can select one of the value from the list but the value settings on the picture above are default and normally recommended.

- **Baudrate** : 9600
- **Databits** : 8
- **Parity** : none
- **Flow Control** : none
- **Stopbit** : 1

4.7.2. DI/DO Setting



You can set and get the information of DI and DO. For ZN-S4000AE, each 4 channel of DI and DO are provided. This webpage is refreshed every3 seconds for checking up DI/DO status.

NOTE : If your GANZ Encoder and Network camera model doesn't support DI and DO, this configuration part is disabled with gray. Please check out the specification of DI/DO of your model.

4.7.3. PTZ

PTZ protocol options are shown in the drop down combo box and you can choose a protocol you want per video channel.

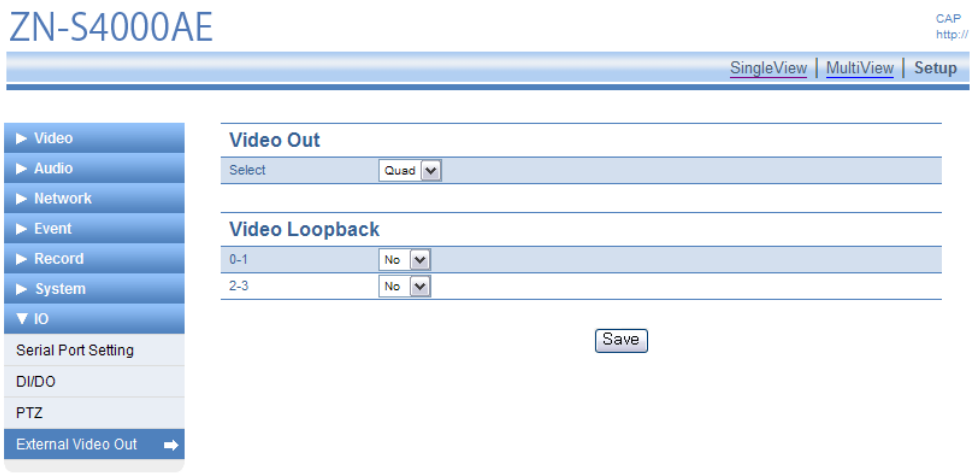
1. Check ***Enable*** in the check box and choose the protocol you need.
2. Set the ***Addr*** and ***CommPort*** .
3. Click ***Apply*** button.

PtzDriver
Select the protocol you want to use from the list.

Addr
You should set the Addr value according to the ID you set by dip switch of PTZ camera.

CommPort(0~1)
0 means RS232C
1 means RS485C

4.7.4. External Video out Setting



This page provides the external video output setting and video loopback function setting. The video loopback is related to the dual stream. The dual stream is useful when you want to use one video stream as separate two streams with different video settings (image size, codec type, frame rate and so on).

Video Out

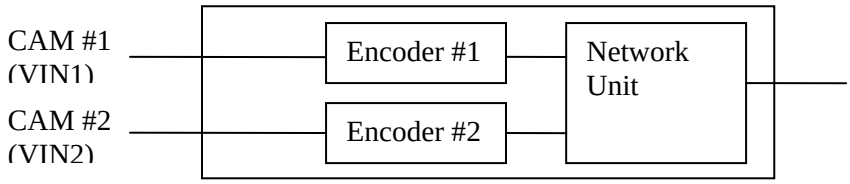
You can choose either single view or multi-view of your stream on the external output. ***Quad*** displays 4 channels as a quad multi-view on the external video out (Only ZN-S4000AE supports Quad option). Switching-view displays the selected channel one by one on the external video out.

Video Loopback

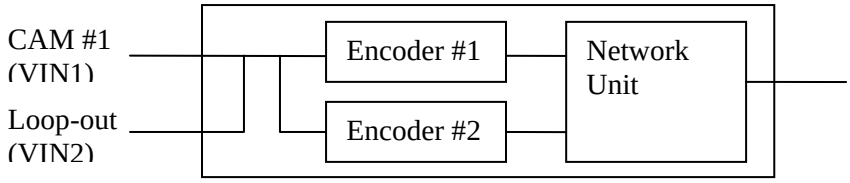
J-11 **YES / NO** : Enable or disable the video loop back of channel 1 stream
2-3 YES / NO : Enable or disable the video loop back of channel 3 stream

Only ZN-S2000AE and ZN-S4000AE are available with dual stream use. The diagram of single stream mode and dual stream mode as below would help your understanding.

Single Stream Mode



Dual Stream Mode



Dual stream of ZN-S2000AE

Single Stream Mode

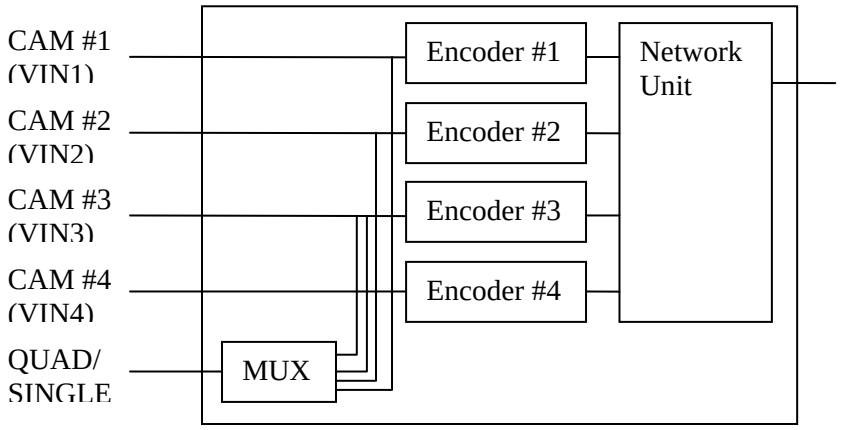
External Video Out

QUAD

CAM#1	CAM#2
CAM#3	CAM#4

SINGLE

CAM#1,
CAM#2
CAM#3, or
CAM#4



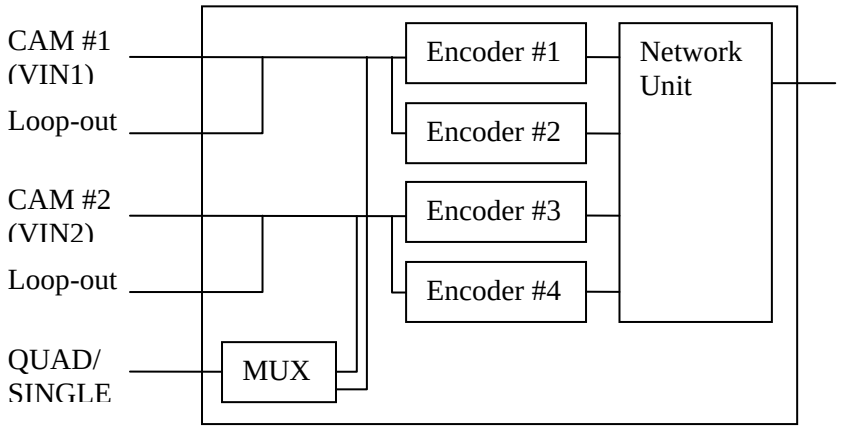
Dual Stream Mode

QUAD

CAM#1	CAM#1
CAM#2	CAM#2

SINGLE

CAM#1,
or
CAM#2



Dual stream of ZN-S4000AE